IN THE CLAIMS

What is claimed is:

1. (Currently Amended) A method, comprising

identifying, at a gateway, a network resource requested by a user of a client that is coupled to the gateway via a network, a first version of the network resource being stored in the client;

requesting the network resource from a server connected to the network;

performing a comparison of a copy of the first version of [[a]] the network resource and a second version of the network resource, the comparison performed by [[a]] the gateway connected to a network, the copy of the first version stored in the gateway, the second version sent to the gateway from [[a]] the server connected to the network; and

when the second version is different from the first version, calculating difference data between the second version and the copy of the first version, sending the difference data to [[a]] the client coupled with the gateway, and storing the second version in the gateway as the copy of the first version.

2. Canceled.

3. (Currently Amended) The method of claim 2, wherein when the client receives the difference data, the difference data is merged with the copy of the first version of the network resource to generate a copy of the second version of the network resource.

4. (Original) The method of claim 1, wherein the client is coupled with the gateway

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through a narrow bandwidth connection.

5.   (Currently Amended) A computer readable medium having stored thereon sequences of instructions which are executable by a system, and which, when executed by the system, cause the system to:

identify, at a gateway, a network resource requested by a user of a client that is coupled to the gateway via a network, a first version of the network resource being stored in the client;

request the network resource from a server connected to the network;

perform a comparison of a copy of the first version of [[a]] the network resource and a second version of the network resource, the comparison performed by [[a]] the gateway connected to a network, the copy of the first version stored in the gateway, the second version sent to the gateway from [[a]] the server connected to the network; and

when the second version is different from the first version, calculating difference data between the second version and the copy of the first version, sending the difference data to [[a]] the client coupled with the gateway, and storing the second version in the gateway as the copy of the first version.

6.   Canceled.

7.   (Currently Amended) The computer readable medium of claim 6, wherein when the client receives the difference data, the difference data is merged with the copy of the first version of the network resource to generate a copy of the second version of the network resource.

8.   (Original) The computer readable medium of claim 5, wherein the client is coupled with the gateway through a narrow bandwidth connection.

9.   (Currently Amended) A method, comprising:

receiving a request for a network resource from a client using a narrow bandwidth connection, the request including an identifier for the network resource, a current version of the network resource being stored in the client;

getting a new ~~copy~~ version of the network resource from a content server using the identifier, the content server connected to a network;

determining if a copy of the current version ~~copy~~ of the network resource exists locally using the identifier;

when the copy of the current ~~copy~~ version of the network resource exists locally, calculating difference data between the ~~current~~ copy of the current version of the network resource and the new ~~copy~~ version of the network resource, and sending the difference data to the client;

when the current copy of the network resource does not exist locally, sending the new ~~copy~~ version of the network resource to the client; and

storing the new ~~copy~~ version of the network resource locally as the ~~current~~ copy of the current version of the network resource.

10.   Canceled.

11.   (Currently Amended) The method of claim 10, wherein the difference data is

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merged with the copy of the network resource stored in the client to generate the new ~~copy~~ version of the ~~net work~~ network resource.

12. Canceled.

13. Canceled.

14. (Original) The method of claim 9, wherein the difference data is calculated using Lempel-Ziff (LZW) compression algorithm.

15. (Currently Amended) A computer readable medium having stored thereon sequences of instructions which are executable by a system, and which, when executed by the system, cause the system to:

receive a request for a network resource from a client using a narrow bandwidth connection, the request including an identifier for the network resource, a current version of the network resource being stored in the client;

get a new ~~copy~~ version of the network resource from a content server using the identifier, the content server connected to a network;

determine if a copy of the current version ~~copy~~ of the network resource exists locally using the identifier;

when the copy of the current ~~copy~~ version of the network resource exists locally, calculate difference data between the ~~current~~ copy of the current version of the network resource and the new ~~copy~~ version of the network resource, and send the difference data to the client;

when the current copy of the network resource does not exist locally, send the new ~~copy~~ version of the network resource to the client; and

store the new ~~copy~~ version of the network resource as the ~~current~~ copy of the current version of the network resource.

16. Canceled.

17. (Currently Amended) The computer readable medium of claim 16, wherein the difference data is merged with the copy of the network resource stored in the client to generate the new ~~copy~~ version of the ~~net work~~ network resource.

18. Canceled.

19. Canceled.

20. (Original) The computer readable medium of claim 15, wherein the difference data is calculated using Lempel-Ziff (LZW) compression algorithm.

21. (Withdrawn) A method, comprising:

sending a request for a new copy of a network resource to a gateway using a narrow bandwidth connection;

receiving data from the gateway in response to the request for the new copy of the network resource;

when the data is difference data, merging the data with a stored current copy of the network resource to form the new copy of the network resource, and storing the new copy of the network resource; and

when the data is not the difference data, storing the data as the new copy of the network resource.

22.   (Withdrawn) The method of claim 21, wherein receiving data from the gateway comprises receiving a difference data indicator, wherein when the difference data indicator is set, the data is the difference data, and when the difference data indicator is reset, the data is not the difference data.

23.   (Withdrawn) The method of claim 21, wherein the difference data is calculated by the gateway using a mirror copy of the current copy of the network resource and a new copy of the network resource provided by a content server.

24.   (Withdrawn) The method of claim 23, wherein the difference data is calculated using Lempel-Ziff (LZW) compression algorithm.

25.   (Withdrawn) A gateway computer system, comprising:

a global cache for storing mirror copies of network resources stored at a client computer coupled with the gateway computer through a narrow bandwidth connection, the network resources having previously transmitted to and stored in the client computer;

a comparison means to determine if a copy of a network resource sent by a content server is

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equivalent to a copy of a network resource stored in the global cache, the copy of the network resource sent by the content server in response to a request from the client computer for an updated copy of the network resource; and

a difference data calculation means to calculate difference data representing difference between the copy of the network resource sent by the content server and the copy of the network resource stored in the global cache when these copies are different.

26. (Withdrawn) The system of claim 25, wherein the gateway computer sends the difference data to the client computer.

27. (Withdrawn) The system of claim 26, wherein the difference data is merged with a copy of the network resource stored in the client computer to create an updated copy of the network resource, the updated copy of the network resource being equivalent to the copy of the network resource sent by the content server to the gateway computer in response to the client computer requesting for the updated copy of the network resource.

28. (Withdrawn) A gateway computer system, comprising:

a global cache for storing mirror copies of network resources stored at a client computer coupled with the gateway computer through a narrow bandwidth connection, the network resources having previously transmitted to and stored in the client computer;

logic to determine if a copy of a network resource sent by a content server is equivalent to a copy of a network resource stored in the global cache, the copy of the network resource sent by the content server in response to a request from the client computer for an updated copy of the

network resource; and

logic to calculate difference data representing difference between the copy of the network

resource sent by the content server and the copy of the network resource stored in the global

cache when these copies are different.

29.   (Withdrawn) The system of claim 28, wherein the gateway computer sends the

difference data to the client computer.

30.   (Withdrawn) The system of claim 28, wherein the difference data is merged with

a copy of the network resource stored in the client computer to create an updated copy of the

network resource, the updated copy of the network resource being equivalent to the copy of the

network resource sent by the content server to the gateway computer in response to the client

computer requesting for the updated copy of the network resource.

31.   (Withdrawn) A client computer system, comprising:

a local cache for storing copies of network resources previously transmitted from a

gateway computer, the gateway computer coupled with the client computer through a narrow

bandwidth connection, the gateway computer connected to a network;

means for determining if data received from the gateway computer is difference data, the

difference data representing a difference between a copy of a network resource sent from a

content server to the gateway computer and another copy of the same network resource stored in

the local cache, the content server connected to the network; and

means for merging the difference data with the copy of the network resource stored in the local

cache to create a merged data, the merged data being equivalent to the copy of the network resource sent from the content server.

32.   (Withdrawn) The system of claim 31, wherein the gateway computer calculates the difference data.

33.   (Withdrawn) The system of claim 32, wherein the gateway computer calculates the difference data using Lempel-Ziff compression algorithm.

34.   (Withdrawn) A client computer system, comprising:

a local cache for storing copies of network resources previously transmitted from a gateway computer, the gateway computer coupled with the client computer through a narrow bandwidth connection, the gateway computer connected to a network;

logic to determine if data received from the gateway computer is difference data, the difference data representing a difference between a copy of a network resource sent from a content server to the gateway computer and another copy of the same network resource stored in the local cache, the content server connected to the network; and

logic to merge the difference data with the copy of the network resource stored in the local cache to create a merged data, the merged data being equivalent to the copy of the network resource sent from the content server.

35.   (Withdrawn) The system of claim 34, wherein the gateway computer calculates the difference data.

36.   (Withdrawn) The system of claim 35, wherein the gateway computer calculates the difference data using Lempel-Ziff compression algorithm.

37-55. Canceled.